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Management Sciences for Health

Cover photo: Distribution of transport containers for sputum samples to the newly trained providers at the TB/HIV clinic at the private Maternity GALILEE in Kinshasa on September 23, 2015 (Photo credit: Jean Ngoy, CTB/PEPFAR/MSH)

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Table of Contents

List of Tables

List of Tables

List of Figures

List of Abbreviations and Acronyms

AD	Action Damien
ART	Antiretroviral therapy
ARV	Antiretroviral
ATS	American Thoracic Society
BCP	*Bureau de Coordination provincial du PNLS* /Provincial Coordination Office of the National HIV Program
CAD	*Club des Amis Damien*/Club of Friends of Damien
CS	*Centre de santé*/health center
Cordaid	*Organisation Catholique d'Aide et de Développement from the Netherlands*
CPLT	*Coordination Provinciale Lèpres Tuberculose* /Provincial coordination areas of the National Leprosy and TB Program
CPT	Cotrimoxazole preventive therapy
CTB	Challenge TB
CSDT	*Centre de Santé de diagnostic et Traitement de la tuberculose* /Center for diagnosis and treatment of TB
CST	*Centre de Santé de Traitement de la tuberculose*/ Center for treatment of tuberculosis
DPS	*Division Provinciale de Santé*/Provincial Health Division
DRC	Democratic Republic of Congo
EGPAF	Elizabeth Glaser Paediatric Aids Foundation
FHI 360	Family Health International 360
FPLUS	*Femmes Plus*
HOP	Hôpital/Hospital
ICAP	International Center for AIDS Care and Treatment Program
KIN	Provincial Coordination of the National Leprosy and TB Program of Kinshasa
KNCV	KNCV Tuberculosis Foundation
KTO	*Katanga Ouest*/Provincial Coordination of the National Leprosy and TB Program of Katanga West
KTS	*Katanga Sud*/ Provincial Coordination of the National Leprosy and TB Program Of Katanga South
LNAC	*Ligue nationale antituberculeuse et anti-lépreuse du Congo*/National League Against Tuberculosis and Leprosy
MDR-TB	Multidrug-resistant tuberculosis
MOH	Ministry of Health
MSH	Management Sciences for Health
NTP	National TB Program
NGO	Nongovernmental organization
PATH	Program for Appropriate Technology in Health
PEPFAR	President's Emergency Plan for AIDS Relief
PLHIV	People living with HIV
PNLS	*Programme National de Lutte contre le Sida*/ National AIDS Control Program
PNLT	*Programme National de Lutte contre la Tuberculose*/National Tuberculosis Control Program
POE	*Province Orientale Est*/Provincial Coordination of the National Leprosy and TB Program of Katanga Est
POO	*Province Orientale Ouest*/Provincial Coordination of the National Leprosy and TB Program of Katanga West
ProVIC	*Programme de VIH Intégré au Congo/*Integrated HIV Program of Congo
PSI	Population Services International
SCMS	Supply Chain Management System
TB	*Tuberculose*/Tuberculosis
Union	*Union Internationale Contre la Tuberculose et les Maladies Respiratoires/*International Union Against Tuberculosis and Lung Disease
USAID	United States Agency for International Development
VIH	*Virus de l'Immunodéficience Humaine*/Human immunodeficiency virus
WHO	World Health Organization
ZS	*Zone de Santé* /health zone

Executive Summary

Challenge TB (CTB) is the flagship global mechanism for implementing the tuberculosis (TB) strategy of the United States Agency for International Development (USAID) as well as contributing to TB/HIV activities under the US President's Emergency Plan for AIDS Relief (PEPFAR). Challenge TB collaborates with other national and international initiatives in providing global leadership and support for national TB control efforts. Challenge TB, led by the KNCV Tuberculosis Foundation (KNCV), is a USAID-funded five-year global program to decrease TB mortality and morbidity in high-burden countries. The program is implemented by a consortium of nine partners led by KNCV: the American Thoracic Society (ATS), Family Health International (FHI 360), Interactive Research & Development, Japanese Anti-Tuberculosis Foundation (JATA), and Management Sciences for Health (MSH), Program for Appropriate Technology in Health (PATH), The International Union Against Tuberculosis and Lung Disease (The Union), and the World Health Organization (WHO).

Challenge TB's main objectives are to improve access to quality, patient-centered care for TB, TB/HIV, and multidrug-resistant (MDR)-TB services; to prevent transmission and disease progression; and to strengthen TB platforms.

In the Democratic Republic of Congo (DRC), The Union will act as the technical lead for Challenge TB, responsible for overseeing the successful implementation of the project, and coordinating with the partners at the national and international level. MSH is a collaborating partner in the implementation of TB/HIV activities in three provinces: Katanga, (Lubumbashi, and Kolwezi), Oriental (Kisangani and Bunia), and Kinshasa, all funded under PEPFAR.

At the community level, the project works with three local nongovernmental organizations (NGOs) through subcontracts. They include *Club des Amis de Damien* (CAD), *la Ligue Nationale Anti-Tuberculeuse et Anti-Lepreuse au Congo* (LNAC), *La Fondation Femmes Plus (FPlus*), which all work with communities in TB care.

This report focuses solely on PEPFAR-funded TB/HIV activities implemented by MSH under the Challenge TB project. There is a separate report for non-PEPFAR-funded activities implemented under Challenge TB by The Union.

The MSH office in Kinshasa was already managing other USAID-funded projects before the start of Challenge TB. The MSH office accommodated The Union staff until a separate office was created.

MSH TB and HIV technical experts collaborate closely with the National TB Control Program (PNLT) and the National Program to Fight AIDS (PNLS) at the national level. The project also works at an intermediate level in five Provincial Leprosy and TB Coordination areas (CPLTs) and Provincial Coordination offices of the National AIDS Control program (BCP/PNLS) under DRC's newly established 26 provinces, as of May 2015, (see map on page 10). This is why the project has an office in Lubumbashi where some of its staff works with CPLT Haut-Katanga (KTS) and Lualaba (KTO) to provide technical and logistical support from nearby. Staff from the Kinshasa office offer support for the CPLT of Kinshasa (KIN) and those of Oriental Kisangani (POO), and Bunia (POE) until September 2016 when the project will cease to support these two provinces to concentrate mainly in Kinshasa and Katanga as per PEPFAR's most recent decision.

Within these five CPLTs, the project worked in 34 health zones (HZ): 16 in KIN, 12 in KTS, 2 in POO, 1 in Eastern Province POE, and 3 in KTO (Table 1) and in collaboration with the PNLT/CPLTs, PNLS/BCP, civil society organizations (LNAC, CAD, FPLUS), the Damien Foundation, and PEPFAR implementing partners (Integrated HIV Program of Congo, International Center for AIDS CARE and Treatment Programs, FHI360, the Elizabeth Glaser Pediatric AIDS Foundation, and Population Services International). CTB sites were selected after a mapping of all potential sites in the chosen provinces.

During the mapping exercise, targets (the numbers of TB patients and expected co-infected patients annually) were also calculated based on the incidence of TB and TB/HIV in the DRC, taking into account the population numbers in the health centers' catchment areas. CTB considers 70% (8,725/12,464) of annual expected TB cases. The target of TB/HIV expected is 15% (1,309/8,725) of TB cases.

Table 1: Sites with TB/HIV co-infection from baseline mapping exercise

N°	Province	CPLT	HZ	Sites										Health area Population	Number of TB cases estimated	Target for number of TB patients notified 70%	Target for TB patients with HIV infection
				CSDT*	CST**	TOTAL	PUBLIC			PRIVATE			TOTAL				
							HOP	Maternity	CS	HOP***	Maternity	CS					
1	Kinshasa	KIN	16	7	76	83	0	0	5	10	10	58	83	2,311,732	7,559	5,291	794
2	Katanga	K T S	12	16	30	46	0	0	13	1	0	32	46	563,839	1,844	1,291	194
		KTO	3	8	14	22	0	0	6	1	0	15	22	597,078	1,952	1,366	205
3	Province Oriental	POO	2	4	12	16	1	0	3	0	0	16	16	181,444	593	415	62
		POE	1	3	9	12	1	0	7	2	0	2	12	157,491	515	361	54
	Total		34	38	141	179	2	0	34	14	10	119	179	3,811,584	12,464	8,725	1,309

** Center for diagnosis and treatment of TB*
***Center for Treatment of Tuberculosis*
***Hospital*

The five CPLTs have received support for TB/HIV activities in terms of assessment and identification of project sites, technical and logistical support during capacity-building sessions, and validation meetings regarding quarterly reports.

At the end of this first year the major achievements are:

- The mapping of health zones and health centers, public and private hospitals, and maternity wards that will work with CTB. This was followed by the baseline assessment made by CTB in 140 of 179 co-infection sites identified in the mapping, which now will report their data in the national health information system of PNLT.
- The training by a joint team of PNLT and PNLS of 356 care providers on TB/HIV management in the five project CPLTs (KIN, KTS, KTO, POO, and POE). CTB provided technical, financial, and logistical support for their organizations.
- Support for meetings to validate quarterly data on the TB/HIV co-infection in Kisangani and Bunia.

Introduction

The Democratic Republic of Congo (DRC), located in Central Africa, is about two-thirds the size of Western Europe and has an estimated 75 million inhabitants, 70% of whom are under the age of 25. DRC borders nine countries: the Republic of Congo to the west; Uganda, Burundi, Rwanda, and Tanzania to the east; the Central African Republic and the Republic of South Sudan to the north; and Zambia and Angola to the south.

Figure 1: Map of DRC with its 26 provinces, as of May 2015

Conflict and political instability has marked the past two decades in the DRC, slowing development. Over 87% of the population lives on less than US$1.26 a day, and the per capita gross domestic product is one of the lowest in the world ($462.6). The UN Human Development Index (2014) ranked DRC 186 among 187 countries. Tuberculosis (TB) and HIV represent a heavy economic and social burden. With more than 100,000 cases of TB detected each year, DRC is among the 22 countries which bear 80% of the global burden of TB in general; it is also among the 27 countries with 85% of the global burden for mortality related to multidrug-resistant tuberculosis (MDR-TB).

Table 2: Estimates of TB burden in DRC, 2014

Population 2014: 75 million

	NUMBER (thousands)	RATE (per 100 000 pop.)
Mortality (excludes HIV+TB)	52 (38–68)	69 (50–90)
Mortality (HIV+TB only)	6.3 (5–7.7)	8.4 (6.7–10)
Prevalence (includes HIV+TB)	400 (210–640)	532 (282–859)
Incidence (includes HIV+TB)	240 (220–270)	325 (295–356)
Incidence (HIV+TB only)	34 (27–42)	45 (36–56)
Case detection, all forms (%)	48 (43–52)	

Data are as reported to WHO Global TB Report 2015. Estimates of TB and MDR-TB burden are produced by WHO in consultation with countries. Generated: 2015-11-06

HIV infection in DRC is generalized, with a prevalence of 1.2% in the general population.[1] The prevalence is higher among women (1.6%) than men (0.6%), and the most affected by the epidemic is key populations such as female sex workers (6.9%) and men who have sex with men (16, 9%). DRC now ranks tenth among the world's 22 high-burden tuberculosis (TB) countries and fourth among those in Africa (WHO Report, 2010). It is also one of the 27 global high burden MDR-TB countries, responsible for 85% of the global estimates.

Screening of TB patients for HIV has increased slowly since 2008. The problem of national expansion is directly linked to the availability of the care package for the management of co-infected patients: cotrimoxazole preventive therapy (CPT) and antiretroviral treatment (ART). The actual government policy is to introduce HIV counseling and testing only in health facilities when these drugs are also available at the same site or at least at the district level. The National TB Control Program (PNLT) and National AIDS Control Program (PNLS) recommend that all persons living with HIV (PLHIV) be screened for TB.

In 2014, PNLT reported that the proportion of all TB patients tested for HIV was only 46%, and among tested TB patients 14% were found to be HIV positive. However, of these, 79% were on CPT and 67% on ART. Table 2 shows the trend of HIV testing and care among all notified TB patients from 2008 to 2014.

[1] ***DHS 2014, UN Reports UN-DRC, UNAIDS Reports***

Table 3: HIV-related activities for patients with TB, all forms, in DRC, 2008-2014

Year	TB patients notified number	TB patients with an HIV test result %	TB patients HIV positive %	TB patients on CPT %	TB patients on ART %
2008	108,215	20%	18%	0%	0%
2009	115,625	27%	20%	45%	21%
2010	118,636	24%	18%	24%	9%
2011	114,290	27%	16%	54%	42%
2012	112,619	31%	16%	61%	40%
2013	111,881	44%	16%	71%	46%
2014	116,894	46%	14%	79%	67%

Furthermore, according to the data collected in five provinces carried out so far in 2015, CPLT PEPFAR, out of the 50% of the TB patients tested for HIV, 20% were tested positive and 91% are received cotrimoxazole and 65% were put on ART. WHO recommends that all HIV-infected TB patients should be commenced on ART irrespective of their CD4 count.

To address this gap, Challenge TB (CTB) will support the provincial leprosy and TB control areas (CPLTs) in the implementation of their collaborative TB/HIV activities. These collaborative TB/HIV activities have the objectives of creating the mechanism of collaboration between TB and HIV programs, reducing the burden of TB among people living with HIV and reducing the burden of HIV among TB patients. Table 4 below shows the trend of HIV testing and care among all notified TB patients from five CPLTs of three PEPFAR DRC provinces in 2014.

Table 4: TB/HIV activities for patients with TB, all forms, in CPLTs of PEPFAR provinces, 2014

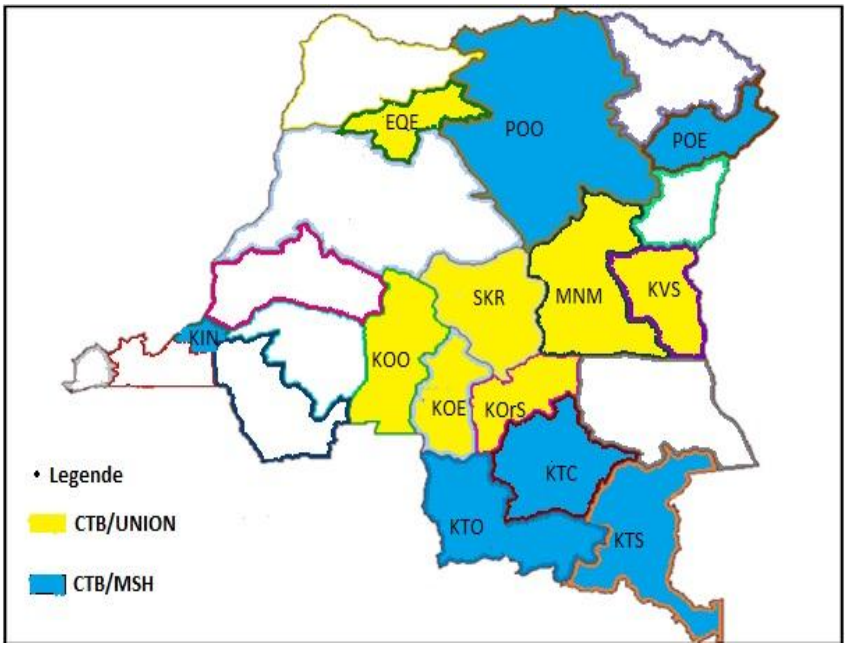
CPLT	TB cases notified in 2014 in 5 CPLT	TB cases counseled on HIV (DCIP)		Patients with an HIV test result		HIV test +		Patients on CPT		Patients on ART	
		#	%	#	%	#	%	#	%	#	%
KIN	20,613	19,339	94%	18,054	88%	2,600	14%	2,069	80%	1,843	57%
KTO	2,320	1,213	52%	704	30%	197	28%	183	93%	121	61%
KTS	7,783	6,257	80%	5,403	69%	1,024	19%	937	92%	748	57%
POE	4,775	1,958	41%	1200	25%	203	17%	198	98%	185	91%
POO	5,104	3,880	76%	1,809	35%	399	22%	381	95%	327	57%
Total	**39,163**	**32,647**	**69%**	**27,170**	**50%**	**4,423**	**20%**	**3,768**	**91%**	**3,224**	**65%**

The global, five-year CTB project, funded by USAID provides technical and financial support to DRC's PNLS and PNLT. The project was designed to support PEPFAR in 54 health zones (HZs) in the 3 PEPFAR provinces in 5 CPLT. It is implemented by The Union as lead and MSH as a collaborating partner. MSH supports TB/HIV activities in 3 PEPFAR provinces, Katanga, (Lubumbashi, and Kolwezi), Oriental (Kisangani and Bunia), and Kinshasa (Kinshasa city),

The project aims to:

- Integrate TB/HIV care into the existing PHC system, achieve quality integrated services in all health facilities, and ensure a continuum care;
- Support activities through local community organizations to fight TB (Club des Amis de Damien [CAD], National League Against TB and Leprosy [LNAC], Femme Plus, etc.). This is accomplished by supporting treatment for TB and with ART, active case-finding and tracing patients who interrupt treatment and bringing them back into care. The map below shows the geographic project areas, with CTB areas supported with PEPFAR funding in blue.

Figure 2: Map of the DRC depicting the CPLTs supported by CTB and MSH, 2014-2015*



*KTC is not included in CTB (error on the map)

Table 5: Details on CTB support in five major cities in DRC, three provinces, 2015

N°	Province	Town	Population	CPLT	CTB activities TB/HIV	HIV prevalence in TB patients 2014 (PNLT)	Adults HIV prevalence 2013 (PNLS)
1	**Province Orientale**	Bunia	366,126 hab.	POE	TB/HIV activities in 1 health zone	17%	3.1%
	Has large mining activities, post-conflict region	Kisangani	935,977hab.	POO	TB/HIV activities in 2 health zones	22%	2.4%
2	Kinshasa- national capital city	Kinshasa	11,587 000 hab.	KIN	TB/HIV activities in 16 health zones	14%	1.6%
3	Katanga Has large mining activities, post-conflict region	Kolwezi	453,147 hab.	KTO	TB/HIV activities in 3 health zones	28%	3.1%
		Lubumbashi	1,786, 397 hab.	KTS	TB/HIV activities in 12 health zones	19%	2.2%

The project began in March 2015 and activities included in the work plan were carried out within established timelines. Other, unplanned, activities were conducted as well, including: a mini-door-to-door campaign of active TB screening in Kinshasa; and different work plans (WP APA1 and APA1B), with the participation of representatives from PEPFAR, the local USAID Mission, PNLT, and PNLS).

This implementation plan included the following:

- A staff recruitment plan detailing all steps in accordance with the procedures of USAID and MSH
  - Development of vacancy notices and job descriptions
  - Publication of job offers
  - Selection of CVs of candidates
  - Preparation and organization of interviews
- A plan for developing the mapping sites
  - Establishment of site selection criteria
  - Development of schedule of meetings with Ministry of Health (MOH) partners, PNLT, PNLS, the CPLT, and PEPFAR implementing partners
  - Information collection (lists of the sites with or without a support partner for TB/HIV activities, list of health zones with health areas and their populations)
  - Meeting with all partners individually for knowledge exchange and orientation
- Development of slides for the presentation of the project to the CTB/TB/HIV section at the MOH at the national level (PNLT and PLNS), intermediate level (Provincial Health Division [DPS], CPLT, BCP/PLNS) and peripheral (health zones and sites)
  - Preparation of the schedule of presentation to the MOH partners, PNLT, PNLS, CPLT, DPS, and health zones
  - Presentation of the project
- Plan and schedule meetings to guide collaboration with NGOs as part of their support regarding community involvement
  - Development of schedule of project presentation to NGOs
  - Presentation of the project to NGOs
  - Support NGOs to develop their plans and budgets
- Development of terms of reference and information-gathering tools for assessment missions
  - Development of assessments missions calendar
  - Completion of assessments
- Calendar and development TB/HIV co-infection training terms of reference
  - Completion of TB/HIV co-infection training
- Development of calendar terms and validation review of references of TB/HIV co-infection data
  - Completion of validation review of references of TB/HIV co-infection data

The CTB work plan in FY1 has been carefully aligned to PNLT "National TB Strategic Plan", which aims to detect 118,140 TB cases, 11,342 TB/HIV patients, and 755 MDR-TB patients by year 2014. The CTB strategic framework is focused on three objectives. Each objective has sub-objectives that are summarized in Table 6 below.

Table 6: List of CTB objectives and sub-objectives in DRC, 2015

Objective 1: Improve access to high-quality patient-centered TB, MDR-TB and TB/HIV services by:

Sub-objective 1: Improving the enabling environment

Sub-objective 2: Ensuring a comprehensive, high-quality diagnostic network

Sub-objective 3: Strengthening patient-centered care and treatment

Objective 2: Prevent transmission and disease progression by:

Sub-objective 4: Implementing infection control measures

Sub-objective 5: Management of latent TB infection

Objective 3: Strengthen TB service delivery platforms by:

Sub-objective 6: Enhancing political commitment and leadership

Sub-objective 7: Ensuring quality data, surveillance and monitoring and evaluation

1. Country achievements by objective and sub-objective

Objective 1: Improved access to high-quality patient-centered TB/HIV services

Sub-objective 1. Enabling environment

Interventions to improve the enabling environment were as follows:

Table 7: HIV-related activities for patients with TB, all forms, in five CPLTs of three PEPFAR provinces, 2014-2015

	Activities planned	Status	Observations
	Map sites in the 54 health areas to integrate the activities	Done	
	Conduct an inventory and training assessment in the provinces where TB/HIV services are provided in private facilities	Done	
	Train private providers on TB, TB/HIV, guidelines, and referral	Done	
	Create community awareness activities through targeted campaigns and TB community groups made up of current and former TB patients	Not done	The contracts with NGO were not yet approved
	Hold quarterly meetings for TB/HIV coordinating bodies in the three provinces	Done	
	Conduct support supervision at health facility level and to community-based organizations to provide technical support	Done	

Table 8: Results of implementation at the TB/HIV co-infection sites

N°	Outcome Indicators	Indicator Definition	Baseline (year/time frame)	Target Y1	Result Y1
1.1.1.	% of notified TB cases, all forms, contributed by non-NTP providers (i.e. private/NGO facilities)	Proportion of TB cases (all forms) reported by non-NTP providers (i.e. private/NGO facilities Indicator value: % Numerator: Number of all TB cases (bacteriologically confirmed positive, clinically diagnosed; includes new and relapse cases) reported by non-NTP providers in the past year. Denominator: Total number of TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) reported by both NTP and non-NTP providers in the past year	NA	% available	22.5% (244/1,084) TB cases reported after training (June to September, 2015) in 28 health centers by non-NTP in the past year (3 HZ of KTO, 6HZ of KTS, 2 HZ of POO and 1 HZ POE)

Results

- A total of 179 sites have been identified in 34 health zones of the five new provinces from April to July 2015. These sites include 133 health facilities in the private sector, 33 health facilities in the public sector, 3 barrack dispensaries (Bunia central prison, Kisangani central prison, and Kassapa prison) and 10 private maternity hospitals. In April 2015, five identification and primary evaluation missions were performed in these three provinces, starting in Kinshasa Province to Province Orientale in May 2015. Katanga was assessed in June 2015.
- In each technical support visit, the project was introduced to the provincial health division (DPS) authorities and a technical work assessment was undertaken to decide which health facilities needed to be included, based on criteria developed by PNLT/PNLS and TB/HIV coordinating bodies.
- Training was carried out every time the evaluation was completed. CTB provided technical, financial, and logistical support for their organization for six days. Bunia and Kisangani started with a series of six-day trainings on TB/HIV co-infection, facilitated jointly by PNLT and PNLS provincial staff. The participants were the doctors, nurses, and laboratory technicians who were trained. A total of 356 people (221 men and 135 women) were trained. This activity continued for 42 days for a total of seven sessions from June to September 2015), covering all the five provinces for 140 of 179 sites. The remaining 39 will be trained in the first quarter of Year 2 after an assessment.

Challenges

- The entire health team requires training in the management of TB/HIV co-infected patients.
- Community involvement in TB care and prevention, including patients' and activists' groups, is necessary to foster their empowerment in matters that strongly affect the common good of the community.
- Uninterrupted and quality-assured supply of medicines and consumables is vital.

Photo2 *Receiving bins for transporting sputum samples to "centre Mère enfant de Barumbu" in Kinshasa by nurses trained in TB/HIV co-infection management, 23 Oct. 2015 (photo credit: Jean Ngoy/MSH/CTB).*

Sub-objective 2: Comprehensive, high-quality diagnostics

The quality of diagnosis was reinforced by the organization of a network of diagnostic laboratories for TB and HIV, including sputum sample collection in laboratories located in small sites of TB/HIV co-infection (spokes) that will start to collect the samples and send them to high-quality laboratories for analysis. These labs are located in large TB/HIV co-infection sites (hubs) which are often centers for diagnosis and treatment of TB (CSDT).

In addition, during 2015, laboratory technicians at 140 sites were trained on rapid testing for HIV and diagnostic methods for TB detection. During these training sessions, special emphasis was placed on the collection, transport, and treatment of sputum smear samples.

Table 9: Results of support activities at laboratory sites for TB/ HIV co-infection

N°	Outcome Indicators	Indicator Definition	Baseline (year/ timeframe)	Target Y1	Result Y1
2.6.4	# of specimens transported for TB diagnostic services	Description: Number of specimens transported for TB diagnostic services via a specimen transport system Indicator Value: Number	NA	NA	1,283 sputum samples from PLHIV and other persons with presumed TB were transported to the hub sites (CSDT) for TB lab examination (ZN). This took place from June to September 2015 in Bunia, Kisangani, Lubumbashi, and Kolwezi. Training took place in August 2015. All of these sputum samples were analyzed and the result is shown in Table 9.

		Level: National and CTB geographic areas Numerator: Number of specimens transported for TB diagnostic services via a specimen transport system			

Results

Building capacity and enhancing universal access to rapid and accurate laboratory diagnostics are necessary to control TB and HIV/TB co-infection. Since quality test results require quality specimens, the accurate, rapid microbiological diagnosis of TB and other mycobacterial infections begins with proper specimen collection and rapid transport to the laboratory. To ensure the collection of the best possible specimen, health care workers were trained, and patients were given good instructions for sputum collection. All specimen containers supplied by the project for specimen transport have secure lids that prevent leakage during transport. A reliable and efficient system for transporting TB specimens (e.g., sputum samples) is essential for effective TB patient care, allowing for more rapid diagnosis, initiation of treatment, and patient follow up.

A significant number of people live far from sites where TB microscopy is performed (CSDT). To address this bottleneck in TB diagnosis and care, the project provided support to the existing transport system (relay transport or *transport en relais*). Lab specimens usually transit through other CST before arriving at the CSDT. In most cases, samples arrive the same day at the CSDT and return the following day. In the case where the center is far or located more than 30 km away, a bicycle is used. The transportation of 1,283 samples is very small compared to what should be done. Each suspected TB case must give two samples. As there were 1,490 people (Table 13) we should have received more than 3,826 samples.

We hope to resolve this issue with quarterly TB/HIV data validation in quarter 1 of Year 2. Furthermore, we expect to significantly increase the number of samples carried in line with NTP technical protocol. There is an opportunity to accomplish this with the arrival of newly contracted local NGOs that will start the implementations of project activities early in Year 2.

Challenges

Improve relay transport samples by providing community health workers with bicycles and integrate the process with other sample collection.

Sub-objective 3. Patient-centered care and treatment

Despite delayed implementation, project sites benefited from training in June 2015 (Bunia and Kisangani) and in August 2015 (Kolwezi and Lubumbashi). HIV tests were in short supply. There was close collaboration with other implementing partners such as the Integrated HIV Program of Congo (ProVIC), the Catholic Organization for Relief and Development (Cordaid), the Global Fund, and others.

Photo 3. Quarterly review of TB/HIV data validation in Bunia. Photo credit: Jean Pierre Simelo/CTB/MSH)

Table 10: Results of TB/HIV co-infection sites in 4 CPLTs (POE, POO, KTS, and KTO) out of a total 5 CPLTs supported by CTB (one CPLT did not report)

N°	Outcome Indicators	Indicator Definition	Baseline (year/ timeframe)	Target Y1	Result Y1
3.2.13	% TB patients (new and re-treatment) with an HIV test result recorded in the TB register	Description: The purpose is to assess how many TB patients know their HIV status, regardless of whether testing was done before or during TB treatment. In settings where HIV is driving the TB epidemic, all TB patients should be offered and encouraged to have an HIV test.	44% at national level - 49,816 cases with known HIV status among 111,881 all form TB cases registered)	50%	46% at the central level (48%) at the 4 CPLTs/3 provinces 168/351

**The remaining one CPLT (Kinshasa) was receiving training and not ready to implement TB/HIV co-infection activities.*

Results

CTB developed partnerships with PEPFAR NGOs. 28 sites responded with provision of data. During year 1 of CTB data are as follows.

Out the Three hundred fifty-one (351) TB patients identified in the health zones in Bunia, Kolwezi, Lubumbashi, Kisangani; hundred and sixty eight were tested for HIV and counseled (48%). Sixty one out of these (36%) were HIV positive (Table 13).

Four hundred and ninety (490) PLHIV were screened for TB and 423 were actually tested for TB, of whom 38 (9%) were diagnosed with TB. (Table 14)

CTB develop partnerships with PEPFAR partners.

The availability of the HIV rapid tests in the health zones have allowed for better detection and treatment.

Challenges

- Provision of data collection tools and reporting forms and train staff in the TB/HIV sites
- Ensuring efficient HIV counselling and testing
- Ensuring that health workers conduct active TB case detection among PLHIV
- Provision of an uninterrupted supply of HIV tests in TB/HIV sites through supply chain management systems (SCMS)

Objective 3. Strengthened TB Platforms

Sub-objective 6. Political commitment and leadership

It was possible to detect 16 bacteriologically confirmed TB patients in four days after a sensitization campaign among 1,634 households. A total of 2,122 samples among 1,061 suspected TB cases were collected. By contrast, the two health centers (St Ambroise and Rene de Haes) detected only seven TB cases in the past year. All diagnosed TB patients underwent HIV testing and were HIV negative.

Sub-objective 7. Quality data, surveillance, and monitoring and evaluation

From the end of July to early August 2015, two quarterly TB/HIV data validation meetings were organized for two days each to enable those involved in the process to harmonize and validate their data before analysis of trends, and to plan and discuss bottlenecks. The project supported the publication of a quarterly report in Bunia and Kisangani on TB/HIV data and disseminates this to the field and other local partners to stimulate quality data collection and use.

Thirty-four participants (28 men and 6 women) consisting of doctors, laboratory technicians, and nurses from the CST/CSDT/zonal health team supported by CTB participated in these meetings. They were invited by the Head of Division of the DPS Tshopo in Kisangani. There were also 27 participants (23 men and 4 women) in Bunia, including doctors, laboratory technicians, and nurses – including six members were part of the TB/HIV coordination teams – a representative of the DPS, an MCZ, and a nurse supervisor, were included in the project.

Sub-objective 11. Human resource development

The PEPFAR TB/HIV component of CTB is implemented by MSH. In the provinces, four technical advisers are assigned to supervise project activities. They support each site through quarterly

technical support visits in close collaboration with the MOH TB and HIV provincial coordination staff. The project also supports community activities through local NGOs and provides technical support to community workers during mini-campaigns and other activities which require strong community engagement.

Table 11: Numbers of providers and teams trained on TB/HIV co-infection

N°	Outcome Indicators	Indicator Definition	Baseline (year/ timeframe)	Target Y1	Result Y1
11.1.3	# of health care workers trained, by gender and technical area	This indicator measures the number of health care workers trained, by gender and technical area Indicator Value: Number Level: National and CTB geographic areas	NA	458 expected providers and zonal health team members to be trained	78% (356/458) providers, including 135 women and 221 men from all these sites have been trained on screening and management of TB/HIV co-infection between June 2015 and September 2015 by the joint teams of facilitators from the two TB/HIV control programs (PNLT and PNLS).

Challenge TB Success Story

Door-to-door Approach Improves Case Detection in Kisenso and Mount Ngafula

Alain Nkelende, a 42-year-old father of two, lives in Kisenso, an urban-rural township of about 33,000 people. When he developed a cough two years ago, he ignored it, thinking it was because of intestinal worms. He chose to self-medicate rather than seek medical treatment at a health facility and his condition did not improve. His situation later improved dramatically because of CTB.

CTB organized a mini public awareness campaign to mark World TB Day in April 2015 among the urban populations in two health zones. This was done in close collaboration with the provincial TB care and prevention team (CPLT) and the Mont Ngafula and Kisenso health zones. Forty men and 20 women from the two health zones were trained on the use of a symptom screening questionnaire to use in a door-to-door screening campaign. In four days, they had visited1,634 households and collected 2,122 sputum samples from 1,061 people with presumed TB. The samples were sent to two laboratories for analysis (CSDT St. Ambrose and CSDT Réné de Haes).

Among the people whose sputum samples were examined 16 patients were diagnosed with sputum-smear positive pulmonary TB. Nkelende was among them. He was advised to have an HIV test as well, which came back negative. He is now on TB treatment and relieved that he is being treated for the right disease.

Photo 4: Door-to- door Awareness in the suburb of Kinshasa in Kisenso (photo credit: Albert NZITA of CPLT/Kin, 22 April 2015)

Key challenges during implementation and actions to overcome

Table 12: Challenges during implementation and actions to overcome them

N°	CHALLENGES	ACTIONS	OBSERVATION
01	Project started late	Quickly developed the work plan for Year 2 to avoid another delay in start-up of activities.	
02	Irregular meetings between partners in the fight against TB/HIV co-infection	- Approached partners - Advocated at PNLT and PNLS to revitalize the consultation framework between different partners.	Along with partners (PROVIC, ICAP*, EGPAF, PSI, AD, CPLT, BCP/PNLS, PNLT, PNLS), we did a mapping exercise, sites were identified, providers trained, increased HIV testing among TB patients and TB screening among PLHIV.
03	No start-up of NGO partner activities due to delay in contract approval	- Worked with NGOs to approve the contracts	In Q1 of APA2
04	Lack of TB/HIV consumables (HIV tests, ARV drugs) in PEPFAR ZS	- Increased collaboration between CPLT and ZS with support from the Global Fund and other PEPFAR implementing partners - Integration in the PEPFAR SCMS mechanisms strengthened	USAID via SCMS to make available 254 rapid HIV test kits sets, 234 kits of 20 D'Ingold test and 221 of chase Buffer + and all the other accessories for laboratories (centrifuges, pipettes of 50µ, Garrote, buffer, needles, syringes)
05	Inadequate transport for supervision and technical support activities of TB/HIV co-infection sites in PEPFAR areas	Currently we rent vehicles but it is desirable to acquire two vehicles for activities implementation.	
06	Long distances between the sites (small health center for the identification of suspects and treatment of confirmed cases) and hub sites (large health centers for diagnosis and treatment)	- Expand the "samples shortcut transport strategy" (small centers far away from the big diagnostic center via small, closest centers) -Make bicycles available	
07	Changing of intervention areas in the PEPFAR provinces	-Adaptation of donor intervention plan of 54 HZ to 34 HZ including 17 saturation HZ, 14 maintenance HZ and 3 transition HZ (all located in oriental province) *	

**Saturation HZ* are targeted as priority for COP 2015 where we should achieve the 90/90/90 objectives; *Maintenance HZ* are HZ targeted to continuous support from PEPFAR; Transition HZ are targeted to be sent to Global Fund transition but will receive a transition plan support.

Way forward in Year 2

- Continue the development of contracts with partners in project sites.
- Complete the training of Guideline of National TB Program (PATI 5) (, 5th Edition) for all structures that did not benefit from training. Involve local NGOs in the promotion of TB/HIV activities.
- Ensure payment fee of the transport of samples and patient support.
- Ensure that all TB patients receive HIV testing and counseling and PLHIV are screened for TB s
- Evaluate TB/HIV saturation sites in new health zones and strengthen the capacity of zonal health teams and health providers implementing in these sites
- Continue to support local NGOs for community activities
- Continue to support community health workers in the transportation of samples
- Continue to support community health workers in conducting mini-awareness campaigns in areas not covered by NGOs
- Support the active screening for TB in prisons
- Support private health facilities, military camps, and private clinics
- Support capacity-building of laboratory sites on TB and HIV tests quality assurance
- Continue technical and financial support to monthly visits to project sites by CTB and MOH health technical staff
- Continue with technical and financial support of monthly supervision of health zones by CTB and MOH technical staff
- Continue with technical and financial quarterly supervisions to health zones, coordination and project sites
- Continue with technical and financial support of bi-annual technical supervision by PNLT and PNLS staff to project zones and sites
- Continue with technical and financial support for minor renovations at the project sites
- Support capacity-building of providers on TB infection control
- Continue with technical and financial support of TB/HIV quarterly meetings for data validation
- Continue with financial support for 5 CPLT and 5 BCP/PNLS operations, health zones
- Continue with contract performance for eligible co-infection sites
- Complete training on the national TB guidelines for all sites have not received this training

ANNEXES

Porte TB: TB/HIV Cascade in HZ

Table 13: TB/HIV co-infection preliminary data of CTB project sites

CPLT	Period	# of suspected TB/quarter	# of samples collected and sent to CSDT/quarter	# of TB detected	# TB counselled on HIV	%	# TB tested for HIV	%	# of TB HIV positive	# TB HIV under CTP	# TB HIV under ARV
KIN	Q3	0	0	0	0	0	0	0	0	0	0
	Q 4	0	0	0	0	0	0	0	0	0	0
KTS	Q3	0	0	0	0	0	0	0	0	0	0
	Q 4	140	107	17	17	100%	15	88%	6	1	2
KTO	Q3	0	0	0	0	0	0	0	0	0	0
	Q 4	68	47	11	11	100%	8	73%	2	3	0
POO	Q3	221	0	19	19	100%	16	84%	5	3	3
	Q 4	297	571	61	50	82%	49	80%	4	4	4
POE	Q3	305	0	113	109	96%	23	20%	22	22	22
	Q 4	459	558	130	113	87%	57	44%	29	26	26
Total		**1,490**	**1,283**	**351**	**319**	**91%**	**168**	**48%**	**61**	**59**	**57**

Table 14: Preliminary data of TB/VIH co-infection of CTB project sites*

Coordination		PLHIV registered in care	# PLHIV screened for TB	# of patients tested (Ziehl-Neelsen or other exam)	# PLHIV with TB confirmed	# of PLHIV started on TB treatment	#of PLHIV on INH
	Q3	0	0	0	0	0	0
KIN	Q 4	0	0	0	0	0	0
	Q3	0	0	0	0	0	0
KTS	Q 4	8	12	76	0	0	5
	Q3	0	0	0	0	0	0
KTO	Q 4	5	5	41	1	0	2
	Q3	0	0	0	0	0	0
POO	Q 4	0	6	159	0	0	0
	Q3	0	0	0	0	0	0
POE	Q 4	884	299	147	37	37	12
Total		**897**	**490**	**423**	**38**	**37**	**12**
%		**100%**	**34%**	**98%**	**9%**	**97%**	**2%**

*There is an issue with the data in the yellow cells, which need to be verified.